

WHAT IS CLAIMED:

1 1. A method for use in wireless equipment, the method comprising the steps of:  
 2 receiving a signal;  
 3 processing the received signal to generate a Yamamoto-Itoh (*YI*) metric; and  
 4 providing a Bit-Error-Rate (*BER*) estimate for the received signal as a function of  
 5 the *YI* metric.

1 2. The method of claim 1 wherein the providing step further comprises the steps  
 2 of:  
 3 retrieving, from at least one look-up table stored in a memory, values for a  
 4 compensation factor as a function of a value of the generated *YI* metric and an initial *BER*  
 5 estimate as a function of the generated *YI* metric; and  
 6 modifying the initial *BER* estimate value with the retrieved compensation factor  
 7 value to provide the *BER* estimate.

1 3. A method for use in wireless equipment, the method comprising the steps of:  
 2 processing a received signal to provide at least one Yamamoto-Itoh (*YI*) metric  
 3 value over a time period;  
 4 selecting a compensation factor value as a function of the provided *YI* metric  
 5 value;  
 6 selecting an initial *BER* estimate value as a function of the provided *YI* metric  
 7 value; and  
 8 providing a Bit-Error-Rate (*BER*) estimate for the received signal as a function of  
 9 the initial *BER* estimate value and the selected compensation factor value.

1 4. The method of claim 3 wherein the providing step further includes the step of  
 2 multiplying the selected compensation factor value with the initial *BER* estimate value to  
 3 provide the *BER* estimate.

4 5. A method for use in wireless equipment, the method comprising the steps of:  
 5 processing a received signal to provide an initial *BER* estimate value for the

1 received signal;  
 2 modifying the initial *BER* estimate value for the received signal with a  
 3 compensation factor value to provide a Bit-Error-Rate (*BER*) estimate for the received  
 4 signal, wherein the compensation factor value is determined as a function of at least one  
 5 Yamamoto Itoh (*YI*) metric value.

1 6. Apparatus for use in wireless equipment, the apparatus comprising:  
 2 a convolutional decoder for processing a received signal for use in determining at  
 3 least one Yamamoto-Itoh (*YI*) metric value; and  
 4 a processor for providing a Bit-Error-Rate (*BER*) estimate for the received signal  
 5 as a function of the at least one *YI* metric value.

1 7. The apparatus of claim 6 wherein the processor (a) retrieves, from at least one  
 2 look-up table stored in a memory, a compensation factor value as a function of the at least  
 3 one *YI* metric value, and an initial *BER* estimate value as a function of the at least one *YI*  
 4 metric value, and (b) modifies the initial *BER* estimate value with the retrieved  
 5 compensation factor value to provide the *BER* estimate.

1 8. The apparatus of claim 6 wherein the processor (a) determines a compensation  
 2 factor value as a function of the at least one *YI* metric value, (b) determines an initial *BER*  
 3 estimate value as a function of the at least one *YI* metric value, and (c) provides the *BER*  
 4 estimate for the received signal as a function of the initial *BER* estimate value and the  
 5 selected compensation factor value.

1 9. The apparatus of claim 8 wherein the processor multiplies the selected  
 2 compensation factor value with the initial *BER* estimate value to provide the *BER*  
 3 estimate.

1 10. A wireless receiver comprising:  
 2 a processor; and  
 3 a memory for storing a look-up table;  
 4 wherein the processor uses a Yamamoto-Itoh (*YI*) metric value as an index into the  
 5 look-up table to retrieve an associated Bit-Error-Rate (*BER*) for a received signal.

1. The first step is to identify the problem or goal. This involves understanding the current situation and what needs to be achieved.